

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-21 (canceled).

Claim 22 (new): A boundary acoustic wave device using a non-leaky propagation type boundary acoustic wave, comprising:

a plurality of boundary acoustic wave elements, each boundary acoustic wave element including a single crystal substrate, a solid layer provided on the single crystal substrate, and electrodes arranged at a boundary between the single crystal substrate and the solid layer; wherein

the single crystal substrates have a same cut angle; and

a propagation direction of a boundary acoustic wave of at least one of the boundary acoustic wave elements is different from that of at least one of the other boundary acoustic wave elements.

Claim 23 (new): The boundary acoustic wave device according to Claim 22, wherein the plurality of boundary acoustic wave elements are boundary acoustic wave filters or boundary acoustic wave resonators.

Claim 24 (new): The boundary acoustic wave device according to Claim 22, wherein the plurality of boundary acoustic wave elements define resonators.

Claim 25 (new): The boundary acoustic wave device according to Claim 22, wherein the boundary acoustic wave device is a longitudinally coupled filter.

Claim 26 (new): The boundary acoustic wave device according to Claim 22, wherein the boundary acoustic wave elements are provided on a single piezoelectric single crystal substrate.

Claim 27 (new): The boundary acoustic wave device according to Claim 22, wherein an electromechanical coefficient of at least one of the boundary acoustic wave elements is different from that of at least one of the other boundary acoustic wave elements.

Claim 28 (new): The boundary acoustic wave device according to Claim 22, wherein a band width of at least one of the boundary acoustic wave elements is different from that of at least one of the other boundary acoustic wave elements.

Claim 29 (new): The boundary acoustic wave device according to Claim 22, wherein a thickness of the electrodes is set so that the acoustic velocity of an SH type boundary acoustic wave is lower than the acoustic velocity of a slow transverse wave propagating through the solid layer and the acoustic velocity of a slow transverse wave propagating through the piezoelectric single crystal substrate.

Claim 30 (new): The boundary acoustic wave device according to Claim 22, wherein a duty ratio of the electrodes is set so that the acoustic velocity of an SH type boundary acoustic wave is lower than the acoustic velocity of a slow transverse wave

propagating through the solid layer and the acoustic velocity of a slow transverse wave propagating through the piezoelectric single crystal substrate.

Claim 31 (new): The boundary acoustic wave device according to Claim 22, wherein $H > 8261.744\rho^{-1.376}$, when ρ (kg/m^3) represents the density of the electrodes, H (λ) represents the thickness of the electrodes, and λ represents the wavelength of a boundary wave.

Claim 32 (new): The boundary acoustic wave device according to Claim 31, wherein $\rho > 3,745 \text{ kg}/\text{m}^3$.

Claim 33 (new): The boundary acoustic wave device according to Claim 31, wherein $33,000.39050\rho^{-1.50232} < H < 88,818.90913\rho^{-1.54998}$.

Claim 34 (new): The boundary acoustic wave device according to Claim 22, wherein the piezoelectric single crystal substrate is a LiNbO_3 substrate, ϕ of Euler angles (ϕ, θ, ψ) of the LiNbO_3 substrate is in the range of -31° to 31° , and θ and ψ are in the range surrounded by points A1 to A13 shown in the following Table 1:

Table 1

Points	ψ (°)	θ (°)
A01	0	116
A02	11	118
A03	20	123
A04	25	127
A05	33	140
A06	60	140
A07	65	132
A08	54	112
A09	48	90
A10	43	87
A11	24	90
A12	0	91
A13	0	116

Claim 35 (new): The boundary acoustic wave device according to Claim 22, wherein the electrodes each include a main electrode layer made from a material selected from the group consisting of Au, Ag, Cu, Al, Fe, Ni, W, Ta, Pt, Mo, Cr, Ti, ZnO, and ITO.

Claim 36 (new): The boundary acoustic wave device according to Claim 35, wherein the electrodes each further include an additional electrode layer laminated on the main electrode layer.

Claim 37 (new): The boundary acoustic wave device according to Claim 36, wherein the solid layer includes a dielectric substance.

Claim 38 (new): The boundary acoustic wave device according to Claim 37, wherein the dielectric substance includes a material primarily composed of SiO₂.

Claim 39 (new): The boundary acoustic wave device according to Claim 37, wherein the solid layer includes a plurality of laminates, each of the plurality of laminates including a plurality of material layers.

Claim 40 (new): The boundary acoustic wave device according to Claim 39, wherein the solid layer includes a layer primarily composed of SiO₂ laminated to a layer primarily composed of Si.

Claim 41 (new): The boundary acoustic wave device according to Claim 37, wherein the solid layer includes at least one material selected from the group consisting of Si, SiO₂, glass, silicon nitride, silicon carbide, ZnO, Ta₂O₅, titanate zirconate lead piezoelectric ceramic, aluminum nitride, Al₂O₃, LiTaO₃, and LiNbO₃.

Claim 42 (new): The boundary acoustic wave device according to Claim 22, wherein the boundary acoustic wave elements each further includes a resin layer adhered to the solid layer.